**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) A method for the controlled separation of a dispersion of an aqueous solution and organic solution, formed in the mixing section of an extraction step during metal recovery, into separated aqueous and organic solution phases in the separation section of a liquid-liquid extraction process, the method comprising:

a) feeding the dispersion into the separation section having a front end, a rear space, two sidewalls, and a longitudinal axis between the front end and the rear space and between the sidewalls;

b) conducting the fed dispersion into an outward flow field of said separation section, which outward flow field is formed by means of a partition wall in the separation section;

c) causing separated aqueous and organic solution phases of the fed dispersion to flow substantially in a direction of the longitudinal axis of the separation section;

d) damming up of the dispersion flow remaining between the separated aqueous and organic solution phases by at least one reversing element placed in the rear part of the outward flow field extending from the sidewall of the separation section to the partition wall, the reversing element comprising at least a first and a

second plate-like components, between which there is a reversing channel;

e) turning the direction of flow of the dispersion substantially to a vertical flow;

f) reversing by means of the at least one reversing element the direction of flow of the dispersion and separated solution phases in the rear space of the separation section in substantially the opposite direction to form a return flow field;

g) returning the dispersion and separated solution phases in the return flow field towards the feed end of the separation section; and

h) removing the separated solutions from the separation section.

2. (Previously Presented) The method according to claim 1, further comprising causing the direction of flow of the dispersion and separated solution phases in the return flow field of the returning step to be parallel with the longitudinal axis of the separation section via a picket fence.

3. (Previously Presented) The method according to claim 1 wherein either or both of the outward flow fields and the return flow fields have a cross-section of the flow fields that decreases constantly in the direction of flow.

4. (Previously Presented) The method according to claim 1, wherein the partition wall has a length that is 85 - 95% of a length of the separation section.

5. (Previously Presented) The method according to claim 1, wherein the first plate-like component of the reversing element, comprises an underflow plate which extends into the separated organic solution phase and comprises an upper part having a slotted zone through which a portion of said organic solution phase flows into the rear space of the separation section as several sub-flows.

6. (Previously Presented) The method according to claim 5, wherein the sub-flows number 10 - 100.

7. (Previously Presented) The method according to claim 1, wherein the damming up of the dispersion flow by the first plate-like component of the reversing element causes the dispersion to flow under a lower edge of the first plate-like component and into the reversing channel.

8. (Previously Presented) The method according to claim 7, wherein the dispersion that has flowed into the reversing channel flows over an upper edge of the second plate-like component and into the rear space of the separation section .

9. (Previously Presented) The method according to claim 1, wherein the metal recovery comprises recovery of one or more of the metals copper, uranium, cobalt, nickel, zinc or molybdenum.

10-29. (Canceled)